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EXAMINER	
CHOJNACKI, MELLISSA M	
ART UNIT	**PAPER NUMBER**
2164	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,165	CALVIGNAC ET AL.	
	Examiner	Art Unit	
	Mellissa M. Chojnacki	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 23 June 2005.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-4,6-23 and 26-34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4,6-23 and 26-34 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications filed on June 23, 2005, claims 5 and 24-25 are cancelled; claims 1, 8, 21-23, 28 and 32 are amended, and new claim 34 are added per applicant's request. Therefore, claims 1-4, 6-23 and 26-34 are presently pending in the application.

Specification

The specification is object too because:

2. The abstract contains the phrase “are provided” in line 1. The abstract should not contain “are provided”. Correction is required.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

DETAILED ACTION

Specification

The specification is object too because:

1. The abstract contains the phrase "are disclosed" in line 1 and "the disclosed structure" in line 7. The abstract should not contain "disclosed ". Correction is required.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

3. Claims 17-18 and 20 are objected to because of the following informalities:

Claims 17 and 20 contain the words "and/or ". They should not contain "and/or", it should either be "and" or "or". Appropriate correction is required.

Claim 18 is objected to because it is dependent on objected claim 17.

Claim Rejections - 35 USC § 112

4. Claims 32 and 34 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 32 and 34 disclose searches being executed/preformed "sequentially".

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 8-15, 17-23, 26-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (U.S. Patent No. 6,691,124) further in view of Spinney (U.S. Patent No. 5,417,704).

As to claim 1, Gupta et al. teaches a search method (See abstract) comprising the acts of:

b) setting a threshold based upon a fixed number of nodes to be traversed in the tree structure (See column 6, lines 63-67; column 7, lines 1-5; column 9, lines 2-11, where "node" is read on "predetermined characteristic");

c) using select bits from the packet to traverse the tree structure until the threshold is met (See column 4, lines 47-50).

Gupta et al. does not teach using N bits, N being an integer, from a packet as an index into a data structure including a Direct Table with at least one entry and a tree structure operatively coupled to the one entry; storing in a Contents Address Memory (CAM) at least one entry based upon a predetermined characteristic of the packet and a second predetermined characteristic of the tree structure; reading the CAM; and using information at the at least one entry to access a memory location whereat action to be taken relative to the packet is stored.

Spinney teaches address lookup in a packet data communications link, using hashing and content-addressable memory (See abstract), in which he teaches

a) using N bits, N being an integer, from a packet as an index into a data structure including a Direct Table with at least one entry and a tree structure operatively coupled to the one entry (See column 15, lines 4-51);

d) storing in a Contents Address Memory (CAM) at least one entry based upon a predetermined characteristic of the packet and a second predetermined characteristic of the tree structure (See abstract; column 2, lines 8-10; column 26, lines 55-58); and

e) reading the CAM (See abstract; column 2, lines 59-67; column 3, lines 1-2); and

e1)using information at the at least one entry to access a memory location whereat action to be taken relative to the packet is stored (See column 9, lines 26-28).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Gupta et al., to include using N bits, N being an integer, from a packet as an index into a data structure including a Direct Table with at least one entry and a tree structure operatively coupled to the one entry; storing in a Contents Address Memory (CAM) at least one entry based upon a predetermined characteristic of the packet and a second predetermined characteristic of the tree structure; reading the CAM; and using information at the at least one entry to access a memory location whereat action to be taken relative to the packet is stored.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al., by the teachings of Spinney because using N bits, N being an integer, from a packet as an index into a data structure including a Direct Table with at least one entry and a tree structure operatively coupled to the one entry; storing in a Contents Address Memory (CAM) at least one entry based upon a predetermined characteristic of the packet and a second predetermined characteristic of the tree structure; reading the CAM; and using information at the at least one entry to access a memory location whereat action to be taken relative to the packet is stored would

be more efficient in space, time and cost, compared to prior methods (See Spinney, column 2, lines 65-67).

As to claim 8, Gupta et al. teaches a method for correlating a search key with a database (See column 25, lines 32-34, where "address lookup" is read on "search key") comprising the acts of:

a) using N bits, N > 1 from the search key as an index into the database including entries having a Direct Table with at least one entry and at least one tree structure operatively coupled to the one entry (See abstract; column 2, lines 4-10);

b) setting a threshold based upon a fixed number of nodes to be traversed in the tree structure (See column 6, lines 63-67; column 7, lines 1-5; column 9, lines 2-11, where "node" is read on "predetermined characteristic"); and

c) using M bits (M > 1) from the search key to traverse the tree structure until the threshold is met (See column 4, lines 1-17; column 6, lines 63-67).

Gupta et al. does not teach reading from a CAM information that indicates action to be taken relative to the search key.

Spinney teaches address lookup in a packet data communications link, using hashing and content-addressable memory (See abstract), in which he teaches

d) reading from a CAM information that indicates action to be taken relative to the search key (See abstract; column 2, lines 8-10; column 26, lines 55-58).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Gupta et al., to include reading from a CAM information that indicates action to be taken relative to the search key.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al., by the teachings of Spinney because reading from a CAM information that indicates action to be taken relative to the search key would be more efficient in space, time and cost, compared to prior methods (See Spinney, column 2, lines 65-67).

As to claim 9, Gupta et al. as modified, teaches wherein the search key includes a portion of a data packet (See Gupta et al., column 1, lines 12-16).

As to claim 10, Gupta et al. as modified, teaches wherein the information includes the address of a leaf in which the action is stored (See Gupta et al., column 2, lines 11-17).

As to claim 11, Gupta et al. as modified, teaches wherein the reading step further includes the step of using the N bits as index into the CAM (See Spinney, column 3, lines 27-33).

As to claim 12, Gupta et al. teaches at least one memory device, operatively coupled to the processor complex, that stores data structures including a Direct Table, nodes and leaves operatively chained together (See abstract; column 2, lines 4-10); and

Gupta et al. does not teach an apparatus comprising:

an embedded processor complex including a plurality of protocol processors; a control point processor operatively coupled to the processor complex; a plurality of hardware accelerator co-processors accessible to each protocol processor and providing high speed pattern searching, data manipulation and frame parsing; and a Memory location operatively coupled to the processor complex and storing a value representative of the maximum number of nodes to be accessed during a tree search routine.

Spinney teaches address lookup in a packet data communications link, using hashing and content-addressable memory (See abstract), in which he teaches an apparatus (See column 26, lines 62-64) comprising:

an embedded processor complex including a plurality of protocol processors (See column 5, lines 45-49);

a control point processor operatively coupled to the processor complex (See column 5, lines 45-49; column 6, lines 8-13);

a plurality of hardware accelerator co-processors accessible to each protocol processor and providing high speed pattern searching, data

manipulation and frame parsing (See column 4, lines 7-13; column 6, lines 14-21; column 14, lines 55-61); and

a Memory location operatively coupled to the processor complex and storing a value representative of the maximum number of nodes to be accessed during a tree search routine (See column 3, lines 12-17, lines 25-30).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Gupta et al., to include an apparatus comprising: an embedded processor complex including a plurality of protocol processors; a control point processor operatively coupled to the processor complex; a plurality of hardware accelerator co-processors accessible to each protocol processor and providing high speed pattern searching, data manipulation and frame parsing; and a Memory location operatively coupled to the processor complex and storing a value representative of the maximum number of nodes to be accessed during a tree search routine.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al., by the teachings of Spinney because an apparatus comprising: an embedded processor complex including a plurality of protocol processors; a control point processor operatively coupled to the processor complex; a plurality of hardware accelerator co-processors accessible to each protocol processor and providing high speed pattern searching, data manipulation and frame parsing; and a Memory location operatively coupled to the processor complex and storing a value representative of the maximum number of nodes to be accessed during a tree search routine

would be more efficient in space, time and cost, compared to prior methods (See Spinney, column 2, lines 65-67).

As to claim 13, Gupta et al. as modified, teaches further including a Contents Address Memory (CAM) operatively coupled to the processor complex and storing a pointer identifying a location whereat a leaf is stored (See Spinney, column 5, lines 45-59).

As to claim 14, Gupta et al. as modified, teaches wherein the leaf contains information on actions to be taken relative to a packet (See Gupta et al., abstract; column 2, lines 14-17).

As to claim 15, Gupta et al. as modified, teaches wherein the CAM further includes an indicia paired with the pointer the indicia being selected from a portion of the packet (See Spinney, column 16, lines 20-25).

As to claim 17, Gupta et al. as modified, teaches further including a circuit that deletes pointers from the CAM based upon leaf adjustment in the tree structure (See Gupta et al., column 7, lines 7-9; where "insertion or a node removal" are read on "leaf adjustments"; Spinney, column 16, lines 20-25).

As to claim 18, Gupta et al. as modified, teaches wherein the leaf adjustments include deletion (See Gupta et al., column 7, lines 7-9; where "node removal" is read on "deletion").

As to claim 19, Gupta et al. as modified, teaches wherein the Control Point Processor is programmed to generate and forward frames containing information that adjusts the data structure (See Gupta et al., column 7, lines 1-12; Spinney, column 6, lines 8-13).

As to claim 20, Gupta et al. as modified, teaches wherein the adjustment includes leaf deletion or insertion (See Gupta et al., column 7, lines 7-9; lines 20-25; where "node removal" is read on "deletion").

As to claim 21, Gupta et al. teaches a data structure (See abstract) comprising:

a Direct Table having at least two entries (See abstract; column 2, lines 4-10);

a tree structure operatively coupled to each one of the at least two entries and having a plurality of nodes and leaves operatively chained together (See column 4, lines 1-17); and

Gupta et al. does not teach a storage storing a threshold value indicating a fixed predefined number of nodes to be accessed during a walk of the tree structure.

Spinney teaches address lookup in a packet data communications link, using hashing and content-addressable memory (See abstract), in which he teaches a storage storing a threshold value indicating a fixed predefined number of nodes to be accessed during a walk of the tree structure (See column 3, lines 12-17).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Gupta et al., to include a storage storing a threshold value indicating a fixed predefined number of nodes to be accessed during a walk of the tree structure.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al., by the teachings of Spinney because a storage storing a threshold value indicating a fixed predefined number of nodes to be accessed during a walk of the tree structure would be more efficient in space, time and cost, compared to prior methods (See Spinney, column 2, lines 65-67).

As to claim 22, Gupta et al. as modified, teaches further including Contents Address Memory, CAM, in which leaf information is stored if the leaf is connected to a node whose count is above the threshold value (See Gupta et al., column 4, lines 1-17).

As to claim 23, Gupta et al. as modified, teaches further including a co-processor responsive to at least a command to use part of the DA

(Destination Address) of a packet to index into the DT (Direct Table) and the remaining part of the DA to search the associated tree, the co-processor selecting, information stored in a leaf if the leaf is attached to a node below the threshold value or selecting information stored in the CAM if the leaf is attached to a node whose count is above the threshold value (See Gupta et al., column 7, lines 1-12; Spinney, column 14, lines 48-66).

As to claim 26, Gupta et al. as modified, teaches a circuit that delete pointers from CAM based upon non-use of the information within a predefined time interval (See Gupta et al., column 7, lines 7-9; also see Spinney, column 16, lines 20-25).

As to claim 27, Gupta et al. as modified, teaches wherein the adjustment includes leaf insertion (See Gupta et al., column 7, lines 7-9; lines 20-25; where "node removal" is read on "deletion").

As to claim 28, Gupta et al. teaches method (See abstract) comprising:

setting a threshold having a value equal to a fixed predefined number of the N nodes to be traversed (See column 6, lines 63-67; column 7, lines 1-5; column 9, lines 2-11); and

selecting, with a second processor, bits from the key and traversing the tree based upon the bits until the threshold is met (See column 4, lines 47-50).

Gupta et al. does not teach providing a data structure configured as a tree having N nodes, N >1, and M leaves, M >1, operatively coupled to the N nodes; generating with a first processor a key from a packet; providing in a CAM at least one entry with information relating to the key and Information relating to the data structure; reading at least one entry in the CAM to detect a location whereat action to be taken relative to the packet is stored.

Spinney teaches address lookup in a packet data communications link, using hashing and content-addressable memory (See abstract), in which he teaches providing a data structure configured as a tree having N nodes, N >1, and M leaves, M >1, operatively coupled to the N nodes (See column 15, lines 4-51); generating with a first processor a key from a packet; providing in a CAM at least one entry with information relating to the key and Information relating to the data structure (See column 5, lines 45-49; column 9, lines 23-37); reading at least one entry in the CAM to detect a location whereat action to be taken relative to the packet is stored (See abstract; column 2, lines 59-67; column 3, lines 1-2; column 9, lines 26-28).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Gupta et al., to include providing a data structure configured as a tree having N nodes, N >1, and M leaves, M >1, operatively coupled to the N nodes; generating with a first processor a key from a packet; providing in a CAM at least one entry with information relating to the key and Information relating to the data structure;

reading at least one entry in the CAM to detect a location whereat action to be taken relative to the packet is stored.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al., by the teachings of Spinney because providing a data structure configured as a tree having N nodes, N >1, and M leaves, M >1, operatively coupled to the N nodes; generating with a first processor a key from a packet; providing in a CAM at least one entry with information relating to the key and Information relating to the data structure; reading at least one entry in the CAM to detect a location whereat action to be taken relative to the packet is stored would be more efficient in space, time and cost, compared to prior methods (See Spinney, column 2, lines 65-67).

As to claim 29, Gupta et al. as modified, teaches providing a Direct Table (DT) having at least on entry operatively coupled to the tree (See Spinney, column 9, lines 17-21).

As to claim 30, Gupta et al. as modified, teaches wherein Information relating to the key including a destination address in the packet (See Spinney, column 9, lines 23-37).

As to claim 31, Gupta et al. as modified, teaches wherein the information relating to the data structure includes an address where at least one of the N leaves is stored (See Gupta et al., abstract; column 2, lines 8-17).

As to claim 33, Gupta et al. as modified, teaches a pointer provided in the storage, the pointer identifying address of the CAM (See Spinney, column 16, lines 16-31).

7. Claims 2-4, 6-7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (U.S. Patent No. 6,691,124) in view of Spinney (U.S. Patent No. 5,417,704), as applied to claims 1, 8-15, 17-23, 26-31 and 33 above, and further in view of Weaver (U.S. Patent No. 6,173,384).

As to claim 2, Gupta et al. as modified, still does not teach wherein N includes the first sixteen bits of a Destination MAC Address.

Weaver teaches a method of searching for a data element in a data structure (See abstract) in which, he teaches wherein N includes the first sixteen bits of a Destination MAC Address (See column 4, lines 43-49; column 5, lines 25-32).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Gupta et al. as modified, to include wherein N includes the first sixteen bits of a Destination MAC Address.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al. as modified, by the teachings of Weaver because wherein N includes the first sixteen bits of a Destination MAC Address would reduce the chance of a collision, or if a collision occurs, reduces the number of subsequent searches required to find the index values (See Weaver, column 5, lines 17-23).

As to claim 3, Gupta et al. as modified, teaches wherein the tree structure includes a plurality of nodes and leaves operatively coupled to selected nodes (See Gupta et al., column 2, lines 10-14; column 4, lines 1-17).

As to claim 4, Gupta et al. as modified, teaches Pattern Search Control Blocks (PSCBs) carrying search information positioned at selected nodes (See Gupta et al., column 2, lines 14-17, where "search nodes" is read on "Pattern search Control Blocks (PSCBs)"; column 3, lines 59-63).

As to claim 6, Gupta et al. as modified, as modified, teaches wherein the selected bits include the remaining thirty-two bits of the Destination MAC Address (See Weaver, column 4, lines 43-49; column 5, lines 25-32).

As to claim 7, Gupta et al. as modified, teaches wherein the second predetermined characteristic includes leaves (See Gupta et al., column 2, lines

10-14; column 9, lines 4-11, where "node" is read on "predetermined characteristic").

As to claim 16, Gupta et al. as modified, teaches wherein the indicia includes a portion of a Destination MAC Address in the packet (See Weaver, column 4, lines 43-49; column 5, lines 25-32).

Response to Arguments

8. Applicant's arguments filed on 23-June -2005, with respect to the rejected claims 1-4, 6-23 and 26-34 have been fully considered but they are not found to be persuasive:

In response to applicants' arguments regarding claims 18-20 "setting a threshold based upon fixed predetermined number of nodes to be traversed in the tree structure. No such teaching is suggested in Spinney reference", the arguments have been fully considered but are not found to be persuasive, because claims 18-20 do not disclose a threshold. Gupta et al. teaches a branch-search node that can be used for further traversing of the hybrid trie and can also be used to match a lookup search key against one of a set of prefix values (See column 4, lines 47-50). Gupta et al. also teaches a "threshold value T" compared to number of data elements/nodes (See column 4, lines 1-17).

In response to applicants' arguments regarding claims 12-20, which recite "memory…storing a value representative of the maximum number of nodes to be accessed during a tree search routine", the arguments have been fully

considered but are not found to be persuasive, because Spinney teaches storing a maximum number of tree reads (See column 3, lines 12-30).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mellissa M. Chojnacki whose telephone number is (571) 272-4076. The examiner can normally be reached on 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAM RIMELL
PRIMARY EXAMINER

September 1, 2005
Mmc